

Historic, archived document

Do not assume content reflects current
scientific knowledge, policies, or practices.

VOL. 18 No. 16

April 19, 1968

me
67
078

Cooperative **ECONOMIC INSECT REPORT**

U.S. DEPT. OF AGRICULTURE
NATIONAL AGRICULTURAL LIBRARY

MAY 2 - 1968

CURRENT SERIAL RECORDS

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearinghouse and does not assume responsibility for accuracy of the material.

All reports and inquiries pertaining to this release, including the mailing list, should be sent to:

Survey and Detection Operations
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Federal Center Building
Hyattsville, Maryland 20782

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

ARMY CUTWORM damage heavy on alfalfa in Lincoln County, Nevada. ARMYWORM adults as far north as Kansas. (p. 305).

ALFALFA WEEVIL damaging in Anderson County, South Carolina; present throughout central and southern Alabama; larvae active in several other areas. (p. 307).
PEA APHID damage severe in alfalfa in Saline and McPherson Counties, Kansas. (p. 308).
WESTERN FLOWER THRIPS increases heavy in alfalfa and numbers moderate to heavy on citrus in Maricopa County, Arizona. (pp. 309, 311).

PLUM CURCULIO egg laying heavy on plum in central and southern Alabama. (p. 311).

SOUTHERN PINE BEETLE brood density and ratios of increase high in Anderson and Morgan Counties, Tennessee. (p. 312).
FRUIT-TREE LEAF ROLLER damage severe to new oak foliage in Sacramento County, California. (p. 313).

HORN FLY increasing throughout Oklahoma and in Oktibbeha County, Mississippi.
STABLE FLY heavy on cattle in Payne County, Oklahoma. (p. 314).

Predictions

ALFALFA WEEVIL damage expected to be heavy in Kittitas County, Washington. (p. 307).

BOLL WEEVIL could be problem in western Tennessee if summer weather favorable for buildup. Infestations may be general in this area rather than spotted, as in past years. (p. 318).

PERIODICAL CICADAS - Outlook for May and June 1968. (pp. 321-322).

Detection

New State records include a PIT SCALE in Ohio (p. 312) and 2 APHIDS in Maryland (pp. 313, 314).

For new county records see page 317.

Some First Occurrences of Season

APPLE GRAIN APHID in Minnesota; VARIEGATED CUTWORM moths in Iowa; MEADOW SPITTLE-BUG nymphs and PEA APHID in Indiana; ROSY APPLE APHID nymphs in Maryland; PEAR PSYLLA eggs in Michigan; CITRUS WHITEFLY adults in California; MOSQUITOES in Nebraska and Florida.

Special Reports

Report on Survival of Boll Weevil as Determined by Surface Trash Examinations During the Spring - 1968. (pp. 318-320). Number of live weevils per acre in spring of 1968 lower in all areas reporting than in 1967.

Reports in this issue are for week ending April 12 unless otherwise indicated.

CONTENTS

Special Insects of Regional Significance.....	305
Insects Affecting	
Corn, Sorghum, Sugarcane.....	306
Small Grains.....	306
Turf, Pastures, Rangeland.....	307
Forage Legumes.....	307
Cotton.....	309
Sugarbeets.....	309
Potatoes, Tomatoes, Peppers.....	310
Beans and Peas.....	310
Cole Crops.....	310
Cucurbits.....	310
General Vegetables.....	310
Deciduous Fruits and Nuts.....	310
Citrus.....	311
Other Trop. & Subtrop. Fruits.....	312
Small Fruits.....	312
Ornamentals.....	312
Forest and Shade Trees.....	312
Man and Animals.....	314
Households and Structures.....	315
Stored Products.....	315
Beneficial Insects.....	315
Federal and State Plant Protection Programs.....	316
Hawaii Insect Report.....	316
Insect Detection.....	317
Corrections.....	317
Light Trap Collections.....	317
Report on Survival of Boll Weevil as Determined by Surface Trash	
Examinations during the Spring - 1968.....	318
Periodical Cicadas - Outlook for May and June - 1968.....	321

WEATHER OF THE WEEK ENDING APRIL 15

HIGHLIGHTS: Heavy rains soaked portions of Texas and Louisiana. Summer temperatures occurred over portions of the Great Lakes region. Forest fire hazard increased in New York and New England.

PRECIPITATION: Heavy thundershowers drenched the western and central Gulf States Monday and Tuesday and spread eastward to the Carolinas by Wednesday. More than 10 inches fell at Hemphill, Texas, in less than 48 hours. Beaumont received 7.23 inches in 12 hours. The heavy rains caused extensive flooding of roads, bridges, and lowlands in Texas and Louisiana. The weekly totals tapered to 0.5 to 1.5 inches in the Carolinas and to less than 0.5 inch in Florida. Light rains fell along the Washington and Oregon coast during the week followed by weekend snow in Washington which ranged up to 6 inches in the lowlands and to more than 6 inches in the mountains. Snow also fell Saturday in the northern and central Rocky Mountains, the Black Hills, and the northern Great Plains. Snowfall amounts ranged mostly from 1 to 4 inches but the melted water equivalent was generally less than 0.25 inch west of the Red River of the North and ranged from 0.25 to 0.50 inch east of that river. A large area from eastern Washington southward to southern California received no rain. Only light precipitation occurred over the Great Basin, the Rocky Mountains, and the western Great Plains as far south as the Texas Panhandle. Other areas with only light precipitation included the Northeast from New England to Virginia and the Florida Peninsula. The weekend brought beneficial thundershowers, but scattered hail, from Missouri to western Pennsylvania. Strong winds and lack of rain increased the forest fire hazard in New York and New England. Duststorms occurred on Thursday and Friday over portions of the central Great Plains where precipitation has been inadequate and soil moisture reserves have become depleted.

Weather of the Week continued on page 316.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

ARMY CUTWORM (*Chorizagrotis auxiliaris*) - NEVADA - Larvae ranged 6-8 per square foot on alfalfa in Dry Valley, Lincoln County; damage heavy. No plants evident in infested area; alfalfa 2-3 inches high in uninfested areas. (Miller). Larvae heavy and migrating into apartments, homes, and industrial buildings on outskirts of Reno and Sparks area, Washoe County. (Gustafson, Ting). IDAHO - Controls applied to turnip seed field in Caldwell, Canyon County, March 20 (Bechtolt, Homan); infested garden in Boise, Ada County (Hilfiker). WYOMING - Larvae averaged 0-0.75 per square foot in alfalfa in Washakie and Fremont Counties; 0.75-1 inch of new growth apparent. (Burkhardt, Parshall). COLORADO - Larvae 0-2 per square foot in alfalfa 4-5 miles north of Windsor, Weld County. (Alldredge, Johnson). Damaged winter wheat along field margins in Weld County. Ranged 0-2 per row foot 7 miles east of Fort Collins, 0-4 per foot 4 miles north of Milliken, and found in Mead, Johnstown, Ault, and Pierce areas of Weld County. Present in winter wheat in Larimer, Lincoln, and Boulder Counties. (Alldredge et al.). NEBRASKA - Less than 1 per square foot on alfalfa in Fillmore County; 6 per square foot in Scotts Bluff County field. (Hagen, Keith). Larvae light, less than 1 per linear foot, in wheat in Cheyenne, Kimball, and Fillmore Counties. (Keith). OKLAHOMA - Ranged 10-15 per square yard in alfalfa and wheat in scattered fields in Garfield, Major, Alfalfa, and Jackson Counties. (Okla. Coop. Sur.).

ARMYWORM (*Pseudaletia unipuncta*) - KANSAS - Adults taken in blacklight trap in Manhattan, Riley County, April 11. First collection of season. (Simpson). VIRGINIA - Single overwintering larva found under dead bark of dogwood tree in Fairfax County. (Hall, Allen, Mar. 31).

ASTER LEAFHOPPER (*Macrosteles fascifrons*) - WISCONSIN - Survey negative in rye and grass fields in Trempealeau, La Crosse, Crawford, Rock, Vernon, Walworth, and Kenosha Counties. (Wis. Ins. Sur.).

BEET LEAFHOPPER (*Circulifer tenellus*) - WYOMING - Averaged 0.35 per square foot on mostly kochia and mustards in 1,580 square-foot samples of weed hosts during survey of wasteland adjacent to sugarbeet-growing areas of Washakie and other Big Horn Mountain counties. (Lowry et al.).

CORN LEAF APHID (*Rhopalosiphum maidis*) - ARIZONA - Moderate on barley in Casa Grande area, Pinal County. (Ariz. Coop. Sur.). OKLAHOMA - Very light in barley in Garfield County. (Okla. Coop. Sur.).

GREENBUG (*Schizaphis graminum*) - MISSISSIPPI - Adults and nymphs moderate, 10-15 per square foot, on oats in Oktibbeha and Attala Counties; winged adults present. (Dinkins). TEXAS - Medium on 4 to 8-inch wheat in Armstrong County; much control applied March 23-29. (Wheeler). Activity generally decreasing throughout State. (Boring). OKLAHOMA - Ranged 5-60 per linear foot in many wheat fields in central and north-central areas; up to 200 per linear foot in southwest area. Parasitism by a braconid (*Lysiphlebus testaceipes*) up to 75 percent in southwest; active in central and north-central areas. (Okla. Coop. Sur.). KANSAS - Occasional aphid found on wheat in Clay, Cloud, Ottawa, Saline, McPherson, Marion, and Dickinson Counties. (Simpson). NEBRASKA - None found on wheat in Fillmore, Keith, Deuel, Cheyenne, and Kimball Counties; 16 caught in suction trap April 11 in Lincoln, Lancaster County. (Pruess, Keith). MISSOURI - Light, 0-25 per row foot, on wheat and barley in southwest area. (Munson). IOWA - Survey negative on wheat in southwest. (Iowa Ins. Sur.).

POTATO PSYLLID (*Paratrioza cockerelli*) - NEVADA - Adults heavy on *Tetradymia spinosa* in Stillwater area, Churchill County; eggs numerous. (Bechtel, Horton).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - NEW MEXICO - Mostly light in Chaves and Eddy County alfalfa; occasionally spotted and heavy. (Mathews). OKLAHOMA - Medium in alfalfa in Tillman County. (Okla. Coop. Sur.). VIRGINIA - Adults and nymphs averaged 50 per 100 sweeps in 5-acre clover field in Carroll County. (Allen).

CORN, SORGHUM, SUGARCANE

EUROPEAN CORN BORER (Ostrinia nubilalis) - NORTH DAKOTA - Overwintering larval mortality averaged 19 percent in 5 southeast and east-central counties compared with 21 percent in 1967. Mortality ranged 0-50 percent in untilled cornfields. Mortality lowest in Dickey and Ransom Counties, highest in Sargent and Richland Counties. Bird predation in some fields of all counties; bird-marked fields highest in Ransom County, lowest in Richland County. (Kaatz).

BEET ARMYWORM (Spodoptera exigua) - ARIZONA - First instars light and feeding in boots of young sorghum in Glendale area, Maricopa County. (Ariz. Coop. Sur.).

DESERT CORN FLEA BEETLE (Chaetocnema ectypa) - ARIZONA - Adults active on young sheaths of milo on west side of Salt River Valley. Averaged 6 per plant in 10-acre field in Peoria area, Maricopa County. (Ariz. Coop. Sur.).

SUGARCANE BEETLE (Euetheola rugiceps) - ALABAMA - Many hibernating adults emerged throughout Mobile County; most evident around lights. (Seibels).

MAIZE BILLBUG (Sphenophorus maidis) - ALABAMA - Up to 10 adults per clump feeding in large field of 6 to 8-inch volunteer corn; about 5 volunteer clumps per 100 square feet. Volunteer clumps common in southern area. (McQueen).

SMALL GRAINS

ENGLISH GRAIN APHID (Macrosiphum avenae) - KANSAS - Winged females ranged 25-50 per 10 sweeps in wheat in Riley, Clay, Cloud, Ottawa, Lincoln, Russell, Osborne, Rooks, Saline, McPherson, Marion, and Dickinson Counties. (Simpson, Somsen). OKLAHOMA - Light in many north-central area wheat fields. (Okla. Coop. Sur.). ARIZONA - Barley treated in Gadsden area, Yuma County. (Ariz. Coop. Sur.).

APPLE GRAIN APHID (Rhopalosiphum fitchii) - MINNESOTA - Collected for first time this season in trap March 29-April 1 at St. Paul, Ramsey County. This is earliest trapping date for species in State. (Flaskerd). OKLAHOMA - Ranged 5-25 per linear foot in wheat in central, north-central, and east-central areas; 300 per linear foot in Tillman County field. (Okla. Coop. Sur.).

HESSIAN FLY (Mayetiola destructor) - KANSAS - Eggs ranged 0-3 per plant in Dickinson, Ottawa, Lincoln, Russell, Osborne, Rooks, Ellis, and Ellsworth Counties; no hatch. All eggs in very poor condition. (Somsen).

TARNISHED PLANT BUG (Lygus lineolaris) - OHIO - Adults emerged from hibernation on wheat in southern counties. (Rose).

CUTWORMS - UTAH - Problem serious in large areas of small grains in Millard County. (Knowlton et al., Apr. 2). NEBRASKA - Agrotis orthogonia economic in wheat in Perkins, Chase, and Dundy Counties; absent in Keith, Deuel, Cheyenne, and Kimball Counties. (Keith).

BROWN WHEAT MITE (Petrobia latens) - KANSAS - Ranged 10-50 per row foot (little damage) in river bottom fields and 200-500+ (much damage) in hillside and high-land fields in Rooks and Osborne Counties. Counts of trace to 500 per row foot (severe damage) in Ottawa County; trace (no damage) in Dickinson County. (Somsen). NEBRASKA - Ranged 0-50 per linear foot in Cheyenne and Kimball Counties. (Keith). COLORADO - Abundant, 0-20 per leaf, in winter wheat east of Keenesburg, Weld County. (Alldredge, Johnson).

WINTER GRAIN MITE (Penthaleus major) - OKLAHOMA - Heavy in isolated wheat fields in Kay County; light to medium in Kingfisher, Canadian, and Garfield Counties. (Okla. Coop. Sur.).

TURF, PASTURES, RANGELAND

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - NEVADA - Adults light in lawn in Fallon, Churchill County, for a new county record. (Bechtel, Horton).

VARIEGATED CUTWORM (Peridroma saucia) - IOWA - First moths of 1968 collected April 9 in Story County. (Gunderson).

A SOD WEBWORM (Crambus bonifatellus) - CALIFORNIA - Adults heavy in lawns in Buellton, Santa Barbara County. (Cal. Coop. Rpt.).

FORAGE LEGUMES

ALFALFA WEEVIL (Hypera postica) - MARYLAND - Larvae and adults absent from 6 to 10-inch alfalfa on 3 farms at Matthews, Talbot County. Adults averaged 10 per 100 sweeps on adjacent clover and vetch fields. (U. Md., Ent. Dept.). VIRGINIA - Adults 5 and larvae 60 per 100 sweeps in Pulaski County; 50 percent of alfalfa tips infested. (Allen). Larvae ranged 3-5 per tip in Charlotte Courthouse, Charlotte County. (Hendrick). SOUTH CAROLINA - Damage evident on alfalfa in Pendleton area, Anderson County. (Nettles et al., Apr. 2). ALABAMA - Larvae heavy on Regal clover in Bullock County field. Feeding and ragging of leaves heavy in 75-acre field in Shelby County; grower expects to apply controls immediately. Larvae and adults throughout southern and central areas on vetch, crimson clover, and other clovers; permanent damage doubtful. (Andrews et al.). ARKANSAS - Larvae less than 1 per square foot on alfalfa in Fulton, Sharp, and Independence Counties; much higher in extreme northeast. (Roberts). Average counts per 10-sweep sample of alfalfa in southern Mississippi County: Larvae 58 in fall-planted (1967) unflamed and 13 in 2-year-old flamed; 52 in old, flamed and 232 in old, unflamed alfalfa. (Siler). Extremely low in Washington County even though species found 2 years ago. Survey negative in 6 Washington County fields April 12; increasing slowly in north-central area. (Boyer). MISSOURI - First and second instars ranged 0-30 per 100 sweeps in southwest area; very few adults. (Munson). OHIO - Larval development slow in southern area. Stem infestations ranged 0-2 per 10-stem sample in alfalfa in Pickaway, Ross, and Warren Counties; 3 larvae per stem maximum. Mostly first instars present. Alfalfa growth ranged 3-8 inches (average 5) in these districts. (Rose). INDIANA - First and second instars ranged 10-114 per square foot in 7 southern counties; very little damage. (Huber). ILLINOIS - Larvae less numerous than at same time in 1967; one per sweep in several southeastern area fields. Pupation expected in 2-3 weeks. (White). WISCONSIN - First instar, probably this species, on 2-inch Kenosha County alfalfa. (Wis. Ins. Sur.). WYOMING - Adults 0-2 per square foot in 10 alfalfa fields in Washakie and Fremont Counties. (Burkhardt, Parshall). NEW MEXICO - Larvae 0-1 per 25 sweeps in alfalfa in Bernalillo County; one adult collected. (Heninger). NEVADA - Adults mating and laying eggs in Fallon and Stillwater area, Churchill County, and Mason and Smith Valleys, Lyon County; eggs light and spotted. (Bechtel, Horton). WASHINGTON - All stages recovered at Ellensburg, Kittitas County, where infestation occurred in 1967. Little injury to alfalfa; heavy damage expected. (Klostermeyer).

EGYPTIAN ALFALFA WEEVIL (Hypera brunneipennis) - ARIZONA - Decreased to 40 per 100 sweeps in Yuma County and 20 per 100 sweeps in Maricopa County. (Ariz. Coop. Sur.).

CLOVER HEAD WEEVIL (Hypera meles) - ALABAMA - Larvae light to medium on spike heads of crimson clover in several large Autauga County fields. Control efforts expected within 5-10 days since several thousand acres in Autauga and adjoining counties grown for seed. Some pupae observed on older seed heads. (Scott et al.). MARYLAND - Adults, 5-8 per 100 sweeps, in clover and vetch field at Matthews, Talbot County. (U. Md., Ent. Dept.).

CLOVER LEAF WEEVIL (Hypera punctata) - MISSOURI - Ranged 0-25 per square foot in alfalfa in southwest area; 50+ percent of larvae with fungus disease. (Munson).

VEGETABLE WEEVIL (Listroderes costirostris obliquus) - ALABAMA - Adults heavy on crimson clover in Henry and Covington Counties. (Stephenson et al.).

BEAN LEAF BEETLE (Cerotoma trifurcata) - ALABAMA - Many adults swept from crimson clover in Henry, Covington, and Monroe Counties. (Gamble et al.). OKLAHOMA - Averaged 2 per 10 sweeps in alfalfa in Wagoner and Muskogee Counties. (Okla. Coop. Sur.).

CORN FLEA BEETLE (Chaetocnema pulicaria) - ILLINOIS - Averaged less than 10 per 100 sweeps in ditch bank of alfalfa and grasses April 4. (Ill. Ins. Rpt.).

PEA APHID (Acyrtosiphon pisum) - VIRGINIA - Averaged 4 per 100 sweeps in 5-acre clover field in Carroll County. (Allen). INDIANA - Trace on alfalfa in southern third of State. First occurrence of season. (Huber). WISCONSIN - Mostly second instars averaged less than 1 per 20 sweeps in Trempealeau, La Crosse, and Crawford Counties. (Wis. Ins. Sur.). MISSOURI - Ranged 50-1,240 per sweep on alfalfa and red clover in southwest area; heaviest in alfalfa. (Munson). KANSAS - Ranged 2,000-3,500 per 10 sweeps in many alfalfa fields in Saline and McPherson Counties; damage severe. Ranged 100-250 per 10 sweeps in Riley, Clay, and Ottawa Counties; damage light to moderate. Light, 5-25 per 10 sweeps, in Pottawatomie, Jackson, Brown, and Nemaha Counties. (Simpson). ARKANSAS - Light on north-central area alfalfa. (Roberts). Ranged 100-200 per 100 sweeps in Washington County; 5 percent winged and 20 percent parasitized. (Boyer). OKLAHOMA - Ranged 40-200 per 10 sweeps in alfalfa in central, north-central, and southwest areas; predators increasing. (Okla. Coop. Sur.). NEW MEXICO - Mostly light throughout State. (N.M. Coop. Rpt.). ARIZONA - Declined at Yuma, averaged 500 per 100 sweeps; 800 per 100 sweeps in Pinal County. Increased to 1,500 per 100 sweeps in Maricopa County. (Ariz. Coop. Sur.). NEVADA - Light on alfalfa in Moapa Valley, Clark County (Johnson) and in Churchill County (Bechtel, Horton). WASHINGTON - All stages ranged 25-30 (up to 80) per 100 sweeps on alfalfa at Walla Walla area east of Umapine, Walla Walla County; 40 percent alates. (Featherston).

MEADOW SPITTLEBUG (Philaenus spumarius) - VIRGINIA - Newly hatched nymphs infested 30 percent of alfalfa tips in 60-acre field in Pulaski County; no adults found. (Allen). Nymphs in alfalfa at Charlotte Courthouse, Charlotte County; feeding on musk thistle in Pulaski County. (Hendrick). OHIO - Egg hatch in southern and some more northern areas; first instars light in alfalfa in Harrison, Pickaway, Ross, and Warren Counties. (Flessel, Rose). INDIANA - First instars trace; first of season in southern third of State. (Huber).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - NEW MEXICO - Adults 1-6 per 25 sweeps in Chaves and Eddy County alfalfa. (Mathews).

ALFALFA CATERPILLAR (Colias eurytheme) - ARIZONA - Larvae light on alfalfa in Salt River Valley, Maricopa County. (Ariz. Coop. Sur.). NEW MEXICO - Adults abundant in Bernalillo County alfalfa (Heninger); larvae 0-3 per 25 sweeps in Chaves and Eddy Counties (Mathews). KANSAS - Ranged 1-3 per 10 sweeps in alfalfa in Riley, Pottawatomie, Jackson, Brown, and Nemaha Counties. (Simpson). ARKANSAS - Very light in northwest area; occasional larva collected in 6 alfalfa fields. (Boyer).

CUTWORMS - UTAH - Problem serious in large areas of alfalfa in Millard County. (Knowlton et al., Apr. 2). NEW MEXICO - Heavy and spotted in some alfalfa in Artesia area, Eddy County; few fields sprayed. (Campbell).

GREEN CLOVERWORM (Plathypena scabra) - OKLAHOMA - Light, less than 4 per 10 sweeps, in alfalfa in Tulsa, Wagoner, and Muskogee Counties. (Okla. Coop. Sur.).

BEET ARMYWORM (Spodoptera exigua) - ARIZONA - Averaged 20 per 100 sweeps on alfalfa in Salt River Valley, Maricopa County; 60 per 100 sweeps in field at Yuma, Yuma County. (Ariz. Coop. Sur.). NEVADA - Light on alfalfa in Moapa Valley, Clark County. (Johnson).

LYGUS BUGS (Lygus spp.) - VIRGINIA - Adults averaged 5 per 100 sweeps in 5 acres of clover in Carroll County and in 10 acres of newly planted alfalfa in Floyd County. (Allen). NEW MEXICO - Adults 1-4 per 25 sweeps in Bernalillo County alfalfa. (Heninger). ARIZONA - Mostly adults on alfalfa; 80, 50, and 100 per 100 sweeps, respectively, in Yuma, Pinal, and Maricopa Counties. (Ariz. Coop. Sur.). WYOMING - Adults averaged 0-2 per square foot in Washakie and Fremont Counties. (Burkhardt, Parshall). COLORADO - L. hesperus adults 0-2 per square foot in alfalfa east of Loveland, Larimer County. (Alldredge, Johnson).

TARNISHED PLANT BUG (Lygus lineolaris) - MARYLAND - Ranged 100-150 per 100 sweeps in clover and vetch mixture on farm at Matthew, Talbot County. (U. Md., Ent. Dept.). OHIO - Adult emergence from hibernation on forage crops in southern counties. (Rose). ALABAMA - Adults and nearly full-grown nymphs heavy, 5-15 per sweep, on all crimson clover throughout central and southern areas. Heavy migrations expected as clover matures and dies. (McQueen). OKLAHOMA - Ranged 2-5 per 10 sweeps in alfalfa in Payne, Tulsa, Wagoner, and Muskogee Counties. (Okla. Coop. Sur.).

BROWN STINK BUG (Euschistus servus) - ALABAMA - Overwintered adults of this species and Nezara viridula emerged in much of southern area. Heavy, up to 3 per sweep common on maturing seed heads of crimson clover in isolated locations; no eggs or nymphs. (McQueen).

WESTERN FLOWER THRIPS (Frankliniella occidentalis) - ARIZONA - Heavy increases on alfalfa in Goodyear to Buckeye area; 2,000 per 100 sweeps in some Maricopa County fields. (Ariz. Coop. Sur.).

CLOVER MITE (Bryobia praetiosa) - ALABAMA - More widespread and heavier on crimson clover in southern area than in most years. Scattered and medium in 10-acre field in Clarke County; leaves and stems appear badly stung and many leaves turning white from excessive freckling. (Helms et al.).

COTTON

BOLL WEEVIL (Anthonomus grandis) - ALABAMA - Field surveys on 28 farms in Henry, Covington, Monroe, Dallas, Shelby, and Autauga Counties negative for emergence of hibernating adults. Only 7 farms with cotton that had emerged. (Pike et al.).

APHIDS - ARIZONA - Light on underside of new leaves in most untreated fields in Maricopa County. (Ariz. Coop. Sur.). ALABAMA - Aphis gossypii alates with 2-10 young on some plants in 3 fields in Henry and Covington Counties. (McQueen).

A LEAF ROLLER MOTH (Platynota stultana) - ARIZONA - First instars heavy along ends of 20-acre field of newly emerged plants at Sun City and Bell Road area, Maricopa County. (Ariz. Coop. Sur.).

TOBACCO THRIPS (Frankliniella fusca) - ALABAMA - Alates of this and other species light on young cotton in several fields in Henry, Covington, and Monroe Counties; migrated from various plants on field borders and from young Johnson grass clumps in fields. (McQueen).

SUGARBEETS

SUGAR-BEET ROOT MAGGOT (Tetanops myopaeformis) - COLORADO - Larvae 0-10 per square foot in old beet fields in Weld County. (Alldredge, Johnson).

SEED-CORN BEETLE (Agonoderus lecontei) - COLORADO - Adults 0-5 per square yard in soil in sugarbeet fields in Weld County; many in flight. (Alldredge, Johnson).

POTATOES, TOMATOES, PEPPERS

POTATO APHID (Macrosiphum euphorbiae) - FLORIDA - Nymphs and mostly alates very light generally on young tomatoes in Marion County in late March and early April; one moderate infestation required controls. (Graham, Condo).

GREEN PEACH APHID (Myzus persicae) - ARIZONA - Moderate to heavy on potato vines in Surprise area, Maricopa County. (Ariz. Coop. Sur.).

BEANS AND PEAS

BEAN LEAF BEETLE (Cerotoma trifurcata) - ALABAMA - Overwintering adults heavy and migrating to 2 and 3-leaf stage beans in central and southern areas; many holes in leaves and damage heavy to stems at and below ground line on 75 percent of young beans in Monroe County home garden. (Gamble et al.).

COLE CROPS

VEGETABLE WEEVIL (Listroderes costirostris obliquus) - ALABAMA - Heavy localized population destroyed turnips in garden at Florala, Covington County; adults continue heavy. (Stephenson et al.).

CUCURBITS

MELON APHID (Aphis gossypii) - ARIZONA - Young colonies becoming established on melons at Yuma, Yuma County. (Ariz. Coop. Sur.).

SPIDER MITES (Tetranychus spp.) - ARIZONA - Portion of cantaloup field required treatment at Yuma, Yuma County. (Ariz. Coop. Sur.).

GENERAL VEGETABLES

BEET ARMYWORM (Spodoptera exigua) - ARIZONA - Heavy in lettuce at Yuma, Yuma County. (Ariz. Coop. Sur.).

ONION THRIPS (Thrips tabaci) - ARIZONA - Adults abundant on onions in Luke Air Force Base area, Maricopa County. (Ariz. Coop. Sur.).

PACIFIC COAST WIREWORM (Limonius canus) - WASHINGTON - Adults observed on warm, still afternoons in Walla Walla, Pasco, and Quincy April 1-5. (Onsager).

GREEN PEACH APHID (Myzus persicae) - OKLAHOMA - Heavy on spinach in Tulsa County; parasites active. (Okla. Coop. Sur.).

DECIDUOUS FRUITS AND NUTS

EASTERN TENT CATERPILLAR (Malacosoma americanum) - TEXAS - Present on Brazos County peach and plum trees. (Randolph, Apr. 5). SOUTH CAROLINA - Light in peach and apple orchards. (Nettles et al., Apr. 9). INDIANA - Hatching and feeding in progress in Vincennes area. (Dolphin, Apr. 8). OHIO - Hatching since April 1 in southern area; young larvae on apple, flowering crab apple, wild cherry, and quince in Fayette, Washington, Hamilton, Butler, Adams, Warren, Clermont, and Clinton Counties. (Wheeler et al.). Larvae up to 0.25 inch-long in Adams County. (Rose).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - INDIANA - Total of 212 males collected April 2-8 compared with 1,248 taken previous week in Vincennes area;

unfavorable weather responsible for decrease. (Dolphin). MARYLAND - Overwintering eggs light on apple at Hancock, Washington County. (U. Md., Ent. Dept.).

PLUM CURCULIO (Conotrachelus nenuphar) - ALABAMA - Egg laying heavy on plums in central and southern areas; several adults collected. Egg laying punctured over half of small plums examined on many wild trees; many plums in commercial orchard damaged despite sprays in Autauga County. (Scott et al.). TEXAS - Present on Brazos County peach and plum trees. (Randolph, Apr. 5).

PEACH TREE BORER (Sanninoidea exitiosa) - ALABAMA - Damage serious due to excessive girdling below ground line in 6-acre commercial peach orchard in Autauga County; 5 percent of trees dying. Few larvae remain following recommended treatments; much sap and decaying wood on most trees. Some adults emerged in area. (Scott et al.).

APHIDS - WISCONSIN - Rhopalosiphum fitchii hatch on Prunus spp. increased; averaged 5 per bud in western Dane County. Some nymphs nearly grown; no new colonies evident. (Wis. Ins. Sur.). MARYLAND - Dysaphis plantaginea hatch began April 2. Increasing in unsprayed apple orchards at Hancock, Washington County. (U. Md., Ent. Dept.).

ARMORED SCALES - CALIFORNIA - Epidiaspis leperii medium in 10-acre pear orchard at Napa, Napa County. (Cal. Coop. Rpt.). TEXAS - Aspidiotus perniciosus present on Brazos County peach and plum trees. (Randolph, Apr. 5). ALABAMA - Pseudaulacaspis pentagona light in 6-acre commercial peach orchard in Autauga County; orchard receives 2 treatments each winter. (Scott et al.).

PEAR PSYLLA (Psylla pyricola) - MICHIGAN - Egg laying April 2 on pear twigs at Fennville, Allegan County. (Janes).

LYGUS BUGS (Lygus spp.) - UTAH - Active in apple orchards at Providence, Cache County. (Knowlton, Apr. 2). INDIANA - L. lineolaris adults attracted to developing peach buds in Vincennes area. (Dolphin, Apr. 8).

PHYCITID MOTHS (Acrobasis spp.) - FLORIDA - A. juglandis and A. caryae first found feeding March 20 on pecan trees at Monticello, Jefferson County. A. caryae very heavy in some groves March 31. Det. by W.H. Whitcomb. (Whitcomb).

HICKORY SHUCKWORM (Laspeyresia caryana) - FLORIDA - Emergence very heavy; near peak in hibernation cages at Monticello, Jefferson County. (Whitcomb, Mar. 3).

CITRUS

CITRUS THRIPS (Scirtothrips citri) - CALIFORNIA - Medium at Seeley, Imperial County. (Cal. Coop. Rpt.). ARIZONA - Moderate on most home citrus plantings. Commercial groves receiving prebloom application relatively free. Light in Lehi and Chandler Heights area; bloom in progress. Many groves may need 2 treatments due to uneven and prolonged bloom in Maricopa County; treatments continue in Yuma County. (Ariz. Coop. Sur.).

WESTERN FLOWER THRIPS (Frankliniella occidentalis) - ARIZONA - Moderate to heavy on most trees in Salt River Valley, Maricopa County. (Ariz. Coop. Sur.). CALIFORNIA - Medium on citrus at Seeley, Imperial County. (Cal. Coop. Rpt.).

CITRICOLA SCALE (Coccus pseudomagnoliarum) - ARIZONA - Heavy in Litchfield Park area, Maricopa County. (Ariz. Coop. Sur.).

AN ARMORED SCALE (Unaspis citri) - FLORIDA - All stages severe on 9,000 of 90,000 citrus plants in nursery at Plymouth, Orange County. (Van Pelt et al., Apr. 2).

COWPEA APHID (Aphis craccivora) - ARIZONA - Problem continues at Yuma, Yuma County (Ariz. Coop. Sur.).

FORK-TAILED BUSH KATYDID (Scudderia furcata) - ARIZONA - Becoming problem in Chandler Heights and East Mesa areas of Maricopa County; many growers plan dual purpose program to control thrips and katydids. (Ariz. Coop. Sur.).

CITRUS RED MITE (Panonychus citri) - ARIZONA - Treatments continue at Yuma; nearly all lemons infested in Yuma County. (Ariz. Coop. Sur.).

OTHER TROP. & SUBTROP. FRUITS

OLIVE SCALE (Parlatoria oleae) - CALIFORNIA - Medium on loquat trees at Gridley, Butte County. (Cal. Coop. Rpt.).

SMALL FRUITS

RASPBERRY SAWFLY (Monophadnoides geniculatus) - CALIFORNIA - Larvae medium on blackberry bushes at El Modena, Orange County. (Cal. Coop. Rpt.).

A LEAFHOPPER (Erythroneura sp.) - ARIZONA - Appearing on young grape leaves on Yuma Mesa, Yuma County. (Ariz. Coop. Sur.).

ORNAMENTALS

ARMORED SCALES - CALIFORNIA - Aspidiotus perniciosus heavy on flowering plum and crab apple nursery stock at Rancho Santa Fe, San Diego County. Epidiaspis leperii medium on flowering peach in Capitol Park at Sacramento, Sacramento County. Infestations have increased during past 12 months. (Cal. Coop. Rpt.). SOUTH CAROLINA - Fiorinia theae probably most numerous pest on camellias in State; very prevalent on Burford holly in some areas. (Nettles et al., Apr. 3).

A PIT SCALE (Cerococcus kalmiae) - OHIO - Heavy on some azalea bushes in Lake County September 1967. Det. by R.F. Wilkey. This is a new State record. (Walker).

AN APHID (Aphis coreopsidis) - MARYLAND - Collected on privet at Chevy Chase, Montgomery County, June 8, 1966, by C.W. McComb. Det. by L.M. Russell. This is a new county record. (U. Md., Ent. Dept.).

BOXWOOD LEAF MINER (Monarthropalpus buxi) - VIRGINIA - Larval damage heavy to American boxwood in Fairfax County; leaves poorly developed. (Fletcher, Allen, Mar. 23). TENNESSEE - Larvae, pupae, and adults on boxwood in Knox County; 1-2 per leaf on most leaves. (Quillin).

SPRUCE SPIDER MITE (Oligonychus ununguis) - ARIZONA - Heavy April 5 on Italian cypress, juniper, and arbovitae at Tucson, Pima County. (Wene).

FOREST AND SHADE TREES

NANTUCKET PINE TIP MOTH (Rhyacionia frustrana) - OKLAHOMA - Adults active on pines in Wagoner and Garvin Counties. (Okla. Coop. Sur.). ARKANSAS - Adult emergence complete in southern area. (Warren). KANSAS - Adults about 90 percent emerged from overwintering pupae in Virginia and Scotch pines at Mound Valley; some pupal mortality. (Thompson).

PINE WEBWORM (Tetralopha robustella) - TENNESSEE - Overwintering pupae in Polk County soil. (Quillin).

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - TENNESSEE - Overwintering brood in loblolly and shortleaf pines; brood density and ratios of increase high in Anderson and Morgan Counties. (Quillin).

BLACK TURPENTINE BEETLE (Dendroctonus terebrans) - ALABAMA - Large increase in adult and larval feeding in injured pine trees. Over 15 adults removed from recently cut pine stump at home site in Auburn. Larvae active in several pines infested in 1967. (McQueen).

PALES WEEVIL (Hylobius pales) - OHIO - Adults common near Scotch pine stumps in Scioto County; some females with eggs. (Campbell).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - WISCONSIN - High mortality in dead elm logs near Mazomanie, Dane County. (Wis. Ins. Sur.).

A CONIFER APHID (Cinara carolina) - MARYLAND - Collected on Virginia pine at Harmans, Anne Arundel County, June 12, 1967, by C.W. McComb. Det. by L.M. Russell. This is a new State record. (U. Md., Ent. Dept.).

APHIDS - OHIO - First instars of Eulachnus agilis present, aphids heavy on Scotch pine in plantation in Lake County; numerous on some Scotch pine in Coshocton County. Cinara pini common on Coshocton County Scotch pine. (Campbell). WASHINGTON - C. curvipes severe on 12-13 percent of firs on Christmas tree plantations in Clark County. (Shanks, Apr. 5).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - WASHINGTON - Viable eggs heavy under old scales on ponderosa pine in Kamiak Butte State Park, Whitman County. (Soo Hoo, Apr. 5).

A PSYLLID (Trioza tripunctata) - OHIO - Very common on 2 Scotch pine plantations in Scioto and Coshocton Counties; decreasing in Coshocton County. (Campbell).

PINE SAWFLIES (Neodiprion spp.) - OHIO - N. sertifer hatch begun in Hamilton County; first instars light and feeding on Scotch pine needles. (Rose). ARKANSAS - First to fourth instars, mostly second and third, of N. taedae linearis in south-central area; feeding not heavy. (Warren).

A SPIDER MITE (Oligonychus subnudus) - CALIFORNIA - Heavy, damaged pine nursery stock at San Diego, San Diego County. (Cal. Coop. Rpt.).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - ARKANSAS - Very light in southwest area. (Warren). TENNESSEE - Hatch in progress; early instars in small tents on wild cherry in Knox and Blount Counties. (Quillin). SOUTH CAROLINA - Heavy on wild cherry in State. (Nettles et al., Apr. 9). VIRGINIA - Larvae from 3 tents fed extensively on Photinia serrulata at Richmond; unusual host. Very heavy throughout Bedford County; moderate to heavy on wild cherry statewide. (Weidhaas). Tents and larvae on wild cherry in James City and York Counties. (Tate, Apr. 1). Tents 1-2 (average 2) per wild cherry tree at Hampton. (Williams et al., Apr. 5). Mostly on wild cherry and abandoned apple trees in Pulaski, Smyth, Carroll, and Floyd Counties; tents 1-6 per tree. (Allen). INDIANA - Hatch begun April 2-3 in southern quarter of State and April 5 in Johnson County area, central district; egg masses averaged 5 per tree on wild cherry and peach. (Cummings, Huber). WISCONSIN - Egg hatch begun on chokecherry near Janesville April 11; some larval webbing and feeding on opening buds. (Wis. Ins. Sur.).

FRUIT-TREE LEAF ROLLER (Archips argyrospilus) - CALIFORNIA - Larvae heavy on oaks in Sacramento County; damage severe to new foliage. This is second year of heavy infestations. (Cal. Coop. Rpt.).

ELM LEAF BEETLE (Pyrhalta luteola) - IOWA - Adults active in homes in Sioux City, Woodbury County, and at Corydon, Wayne County. Wayne County is a new county record. (Iowa Ins. Sur.). COLORADO - Adults active in many areas of State. (Hantsbarger). ARIZONA - First instars and numerous egg masses on Chinese elm at Coolidge, Pinal County, April 3 and at Tucson, Pima County April 5. (Wene).

A LEAF-MINING WEEVIL (Odontopus calceatus) - TENNESSEE - Feeding and egg laying begun on yellow-poplar in Anderson County. (Quillin).

AN APHID (Myzocallis castaneae) - MARYLAND - Collected on chestnut at Glen Burnie, Anne Arundel County, June 14, 1967, by C.W. McComb. Det. by L.M. Russell. This is a new State record. (U. Md., Ent. Dept.).

AN APHID (Aphis coreopsidis) - MARYLAND - Collected on blackgum at Severna Park, Anne Arundel County, June 12, 1967, by C.W. McComb. Det. by L.M. Russell. This is a new county record. (U. Md., Ent. Dept.).

AN APHID (Euceraphis punctipennis) - MARYLAND - Collected on birch at Clarksville, Howard County, November 7, 1967, by C.W. McComb. Det. by L.M. Russell. This is a new county record. (U. Md., Ent. Dept.).

WALNUT SCALE (Aspidiotus juglansregiae) - CALIFORNIA - Heavy on birch nursery stock at Rancho Santa Fe, San Diego County. (Cal. Coop. Rpt.).

A PIT SCALE (Asterolecanium minus) - CALIFORNIA - Medium on oaks in Capitol Park at Sacramento, Sacramento County. (Cal. Coop. Rpt.).

EUROPEAN ELM SCALE (Gossyparia spuria) - CALIFORNIA - Local infestations numerous on elm trees in northern area. (Cal. Coop. Rpt.).

A GALL WASP (Andricus parmula) - CALIFORNIA - Larvae and nymphs moderate on Engelmann oak at Descanso, San Diego County. (Cal. Coop. Rpt.).

MAN AND ANIMALS

MOSQUITOES - NEBRASKA - First appearance of season April 9 in wooded area near Lincoln, Lancaster County. (Raun). FLORIDA - First Mansonia perturbans of season at Gainesville, Alachua County; annoying fishermen at dusk, in Newnan Lake area (Mercer); becoming nuisance at Gainesville (Fla. Coop. Sur.). ARIZONA - Especially Culex tarsalis, carrier of encephalitis, annoying at Holbrook, Navajo County. Numerous at Safford area, Graham County. (Ariz. Coop. Sur.).

SCREW-WORM (Cochliomyia hominivorax) - Total of 6 cases reported in U.S. April 7-13 as follows: TEXAS - Hidalgo 1, Jim Hogg 1, La Salle 1, Live Oak 1, Zapata 1. CALIFORNIA - Imperial 1. Total of 125 cases reported in portion of Barrier Zone in Republic of Mexico as follows: Territorio sur de Baja California 51, Sonora 43, Coahuila 3, Nuevo Leon 5, Tamaulipas 23. Total of 16 cases reported in Mexico south of Barrier Zone. Barrier Zone is area where eradication operation underway to prevent establishment of self-sustaining population in U.S. Sterile screw-worm flies released: Texas 11,368,000; California 500,000; Mexico 71,820,000. (Anim. Health Div.).

HORN FLY (Haematobia irritans) - OKLAHOMA - Increasing over most of State. (Okla. Coop. Sur.) MISSISSIPPI - Increasing rapidly, averaged 150-175 per head, in Oktibbeha County. (Dinkins). ALABAMA - Adults ranged up to 15 per animal on many beef and dairy animals throughout southern and central areas; emergence from manure piles. (McQueen).

FACE FLY (Musca autumnalis) - WASHINGTON - Emerged from hibernation; becoming household pest April 8 at Prosser, Benton County. (Gerlitz). This is a new county record. (PPC). OHIO - Adults averaged 6 per face on 2 herds of Hereford and Angus cattle in Pike and Highland Counties. (Rose).

STABLE FLY (Stomoxys calcitrans) - OKLAHOMA - Heavy, 15-20 per head, on Payne County cattle; light in Choctaw County. (Okla. Coop. Sur.).

COMMON CATTLE GRUB (Hypoderma lineatum) - MISSISSIPPI - Emerged from backs of cattle in Yazoo County; very severe in some cases, many holes in hides. (Dinkins). OKLAHOMA - Annoying Okmulgee County cattle. (Okla. Coop. Sur.).

A BITING MIDGE (Culicoides tissoti) - FLORIDA - Very abundant around lights and biting humans at Orange City, Volusia County. Det. by F.S. Blanton. (Hennickson, Mar. 22). Biting humans at western Gainesville, Alachua County. (Blanton).

WESTERN BLOODSUCKING CONENOSE (Triatoma protracta) - ARIZONA - Annoying some homeowners in Kirkland area, Yavapai County. (Ariz. Coop. Sur.).

NORTHERN FOWL MITE (Ornithonyssus sylviarum) - SOUTH CAROLINA - This species and chicken lice on flocks of laying hens in Anderson County. (Nettles et al., Apr. 3).

HARD-BACKED TICKS - IDAHO - Dermacentor andersoni nymphs and adults evident on cattle at Ashton, Fremont County. (Henry, Apr. 5). OKLAHOMA - D. variabilis increasing on Payne County dogs; annoying in recreation areas. Amblyomma americanum increasing on cattle and deer in Cherokee County; annoying in recreation areas. (Okla. Coop. Sur.).

HOUSEHOLDS AND STRUCTURES

SUBTERRANEAN TERMITES (Reticulitermes spp.) - MISSISSIPPI - Swarming in Montgomery and Oktibbeha Counties April 2. (Dinkins). OHIO - R. flavipes swarming in central area. (Spilker et al.). NEW YORK - First R. flavipes swarms in New York City February 22. Swarms increased in various parts of city since that date. (Al-Hafidh).

STORED PRODUCTS

COWPEA WEEVIL (Callosobruchus maculatus) - SOUTH CAROLINA - Collected in large soybean bin (315,000 bushels) at Allendale, Allendale County. Det. by J.M. Kingsolver. This is first definite record of bruchid damage on stored soybeans. (Nettles et al., Apr. 9).

BENEFICIAL INSECTS

LADY BEETLES - ARIZONA - Hippodamia convergens per 100 sweeps: 30 on safflower and 50 on alfalfa in Maricopa County; 40 in Pinal County; 60 on barley in Pinal County. Adults and larvae equally numerous. (Ariz. Coop. Sur.). ARKANSAS - H. convergens ranged 8-10 per 100 sweeps in Washington County alfalfa field; occasionally found in other fields. (Boyer). ALABAMA - Chilocorus stigma heavy and feeding on aphids and other pests on ornamentals in Tuscaloosa County and throughout southern area. (Pigott).

GREEN LACEWINGS (Chrysopa spp.) - ARIZONA - Averaged 30 per 100 sweeps in Maricopa, and Pinal County alfalfa; built up in Yuma citrus groves. Buildup moderate in Salt River Valley citrus groves of Maricopa County. (Ariz. Coop. Sur.). ARKANSAS - Adults increasing, 10-15 per 100 sweeps, on alfalfa; no larvae. (Boyer).

HETEROPTEROUS PREDATORS - ARKANSAS - First Geocoris punctipes adult of season collected April 12. (Boyer). NEW MEXICO - Damsel bug adults 3-8 per 25 sweeps on Chaves and Eddy County alfalfa (Mathews); 1-3 per 25 sweeps in Bernalillo County. (Heninger). ARIZONA - Nabis ferus averaged 10 per 100 sweeps on alfalfa on west side of Phoenix, Maricopa County. (Ariz. Coop. Sur.).

HYMENOPTEROUS PARSITIES - ARKANSAS - Increasing, 40-50 per 100 sweeps, on north-west alfalfa; parasitized 20 percent of pea aphids. (Boyer). ARIZONA - Lysiphlebus testaceipes (abraconid) parasitized 50 percent of aphids in citrus groves in Salt River Valley, Maricopa County. (Ariz. Coop. Sur.). WASHINGTON - Aphidius pulcher and A. smithi heavily parasitized pea aphid. Parasitized aphids averaged 12-20 per 100 sweeps; 100+ per 100 sweeps maximum on alfalfa in Walla Walla area east of Umapine, Walla Walla County. (Featherston).

SYRPHID FLIES - ARIZONA - Larvae light in Maricopa County citrus groves. (Ariz. Coop. Sur.).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

CITRUS WHITEFLY (*Dialeurodes citri*) - CALIFORNIA - First adult emergence of season at Tustin, Orange County, March 29. Eradication program discontinued by end of March due to extensive infestation at Sacramento, Sacramento County; San Diego, San Diego County; and Tustin, Orange County. Eradication work will continue at Fresno, Fresno County, and Bakersfield, Kern County, where treatments nearly complete. (Cal. Coop. Rpt.).

GRASSHOPPERS - NEBRASKA - Species of *Pardalophora*, *Arphia*, *Psoloessa*, and *Eritettix* active in pastures in southern panhandle. (Keith, Hagen). FLORIDA - Overwintering *Romalea microptera* egg masses hatching at Gainesville, Alachua County, April 6. Det. by L.A. Hetrick. (Hetrick).

PINK BOLLWORM (*Pectinophora gossypiella*) - ARIZONA - Moths continue to emerge from experimental cages placed over naturally infested cotton plots in Yuma and Maricopa Counties. (Ariz. Coop. Sur.).

HAWAII INSECT REPORT

Fruits - Two more adults of a STINK BUG (*Plautia stali*) taken at light in Manoa, Honolulu, Oahu. Both bore eggs of a TACHINA FLY (*Trichopoda pennipes*).

Turf, Pasture - Adults of a GRASS WEBWORM (*Herpetogramma licarsisalis*) light, larvae heavy, in pasture at Huleia, Kauai; chewed approximately 200 acres of Kikuyu grass to ground level. Larvae, pupae, and adults heavy on various lawn grasses at Hana, Maui; defoliation nearly 100 percent in some areas. Larvae, pupae, and adults heavy on Hilo grass in small paddock at Hakalau, Hawaii Island; as many as 23 larvae and 10 pupae per square foot; grass chewed to ground level. Adults ranged 1-173 in 53 light traps on Oahu; high, 60 or more per trap, at Halawa, Ewa, Kailua, and some Honolulu areas. (Sugawa et al.).

Vegetables - All stages of GREENHOUSE WHITEFLY (*Trialeurodes vaporariorum*) remain heavy on tomato and eggplant, increasing on cucumber and snap beans at Waianae, Oahu; medium on cucumber and eggplant at Pearl City and Kahaluu; medium on snap beans at Waimanalo. (Yamamoto et al.).

Man - Adults of a SCIARID FLY (*Sciara* sp.) very heavy and annoying hotel guests at Kawaihae, Hawaii Island. Unusually heavy rains apparently responsible for "explosion." (Yoshioka).

Household and Structures - FORMOSAN SUBTERRANEAN TERMITE (*Coptotermes formosanus*) swarms light at Waialua, Halawa, Pearl City, and Waipahu light traps on Oahu. (Higa).

Weather of the Week continued from page 304.

TEMPERATURE: Gradual warming occurred over the central and eastern portions of the United States during the week and by Friday afternoon temperatures in the 70's and 80's were common from New Mexico and Texas northeastward to the Great Lakes. The Gulf States continued above normal for the second week and Minnesota for the seventh week. Cloudiness and precipitation kept temperatures within a few degrees of normal from Texas to the Carolinas but Lower Michigan, nearby portions of neighboring States, most of New York, and the northern portions of Pennsylvania and New England averaged 10° to 13° above normal. California, Nevada, and most of Arizona averaged warmer than normal but the cool-weather trend continued in the Northwest from the Pacific Ocean to the Rocky Mountains and as far southward as Utah and western Colorado. Most of the western Great Plains averaged only a few degrees above normal. (Summary supplied by Environmental Data Service, ESSA.)

INSECT DETECTION

New State Records

A PIT SCALE (Cerococcus kalmiae) - OHIO - Heavy on some azalea in Lake County September 1967. Det. by R.F. Wilkey. (p. 312).

A CONIFER APHID (Cinara carolina) - MARYLAND - Collected on Virginia pine at Har-
mans, Anne Arundel County, June 12, 1967, by C.W. McComb. Det. by L.M.
Russell. (p. 313).

AN APHID (Myzocallis castaneae) - MARYLAND - Collected on chestnut at Glen
Burnie, Anne Arundel County, June 14, 1967, by C.W. McComb. Det. by L.M.
Russell. (p. 314).

New County Records

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - NEVADA - Churchill County.
(p. 307).

AN APHID (Aphis coreopsidis) - MARYLAND - Montgomery County. (p. 312). Anne
Arundel County. (p. 314).

ELM LEAF BEETLE (Pyrrhalta luteola) - IOWA - Wayne County. (p. 313).

AN APHID (Euceraphis punctipennis) - MARYLAND - Howard County. (p. 314).

FACE FLY (Musca autumnalis) - WASHINGTON - Benton County. (p. 314).

LIGHT TRAP COLLECTIONS

FLORIDA - Gainesville - 4/6-12, 2 BL - Armyworm (Pseudaletia unipuncta) 3,
granulate cutworm (Feltia subterranea) 33, salt-marsh caterpillar (Estigmene
acrea) 3, tobacco budworm (Heliothis virescens) 1, variegated cutworm (Peridroma
saucia) 1. Monticello - 4/4-10, BL - Armyworm 72, black cutworm (Agrotis ipsi-
lon) 41, granulate cutworm 4, salt-marsh caterpillar 6, tobacco budworm 6, varie-
gated cutworm 25. Sanford - 4/1-6, BL - Black cutworm 8, cabbage looper (Tricho-
plusia ni) 10, fall armyworm (Spodoptera frugiperda) 2, granulate cutworm 36,
tobacco budworm 1, yellow-striped armyworm (Prodenia ornithogalli) 4. KANSAS -
Manhattan - 4/11 - BL - Black cutworm 4, variegated cutworm 12. MISSISSIPPI -
Stoneville - 4/6-12, 2 BL, 34-77°F., precip. 3.83 - Armyworm 51, black cutworm 8,
corn earworm (H. zea) 3, granulate cutworm 1, salt-marsh caterpillar 2, variegated
cutworm 23, yellow-striped armyworm 4. TEXAS - Brownsville - 4/6-12,
2 BL, 52-84°F., precip. 0.98 - Armyworm 91, black cutworm 15, cabbage looper 6,
corn earworm 7, granulate cutworm 12, salt-marsh caterpillar 61, tobacco budworm
6, tobacco hornworm (Manduca sexta) 2, tomato hornworm (M. quinquemaculata) 5,
variegated cutworm 39, yellow-striped armyworm 24. Waco - 4/6-12, BL - Armyworm 83,
beet armyworm (S. exigua) 9, black cutworm 8, cabbage looper 10, corn earworm 5,
granulate cutworm 15, variegated cutworm 71, yellow-striped armyworm 1.

CORRECTIONS

CEIR 18(15):284 - Man and animals - A. vexans in second line should read A. vexans
nocturnus.

Report of Survival of Boll Weevil as Determined by Surface Trash
Examinations During the Spring - 1968

Spring collections of surface ground (woods) trash samples (two square yards per sample) have been completed in six Southern States. Wherever possible, samples were taken from the same locations that were sampled in the fall of 1967. The number of live boll weevil (Anthonomus grandis) adults per acre of ground trash examined and the percent survival are reported in the following paragraphs. For details of the fall (1967) hibernation survey in these six States, see CEIR 18(5): 57-59.

In NORTH and SOUTH CAROLINA, samples were taken March 18-28 in the same four representative areas in which fall examinations were made in 1967. In each area a total of 30 locations (farm sites) was sampled with 3 samples from each area. The areas are as follows: South-central South Carolina (Orangeburg, Dorchester, and Bamberg Counties), Coastal Plain of South and North Carolina (Florence, Darlington, and Marlboro Counties, S.C., and Scotland County, N.C.), Piedmont section of South and North Carolina (Greenville, Anderson, and Spartanburg Counties, S.C., and Mecklenburg, Cleveland, and Union Counties, N.C.), and North-central North Carolina (Northampton, Nash, Wilson, and Edgecombe Counties). The average number of live weevils per acre in these areas was 349, 1,291, 914, and 161, respectively. Percent survival for these areas was 19.4, 18.5, 21.2, and 4.0, respectively. Percent survival was lowest in North-central North Carolina and highest in the Piedmont section of South and North Carolina. In Florence County, South Carolina, an average of 1,022 weevils per acre was found for the spring of 1968, with a winter survival of 18.8 percent. The number of weevils surviving in Florence County is about 34 percent less than the number surviving in the spring of 1967. (Taft, Hopkins).

Survey in TENNESSEE was made in Hardin, McNairy, Hardeman, and Fayette Counties to determine the adult population which overwintered in the western portion of the State. Fall trash examinations indicated an average of 7,580, the highest number on record for this area. Spring counts were made March 5-7, much earlier than usual, in an effort to obtain this information at an earlier date. However, it was possible to collect only half the usual number of samples. It is planned to collect additional samples in April, weather permitting, and release a supplemental report. These limited spring counts indicate an average of 2,420 weevils per acre compared with 3,388 per acre in the spring of 1966. Additional sampling could increase or decrease this figure. This is a survival of 32 percent for 1968 compared with 48 percent in 1967. It appears that infestations will be general rather than occurring in spots, which has been the case in the past. If the weather is favorable for weevil buildup during the summer, this pest could be a serious problem for cotton growers. (Locke).

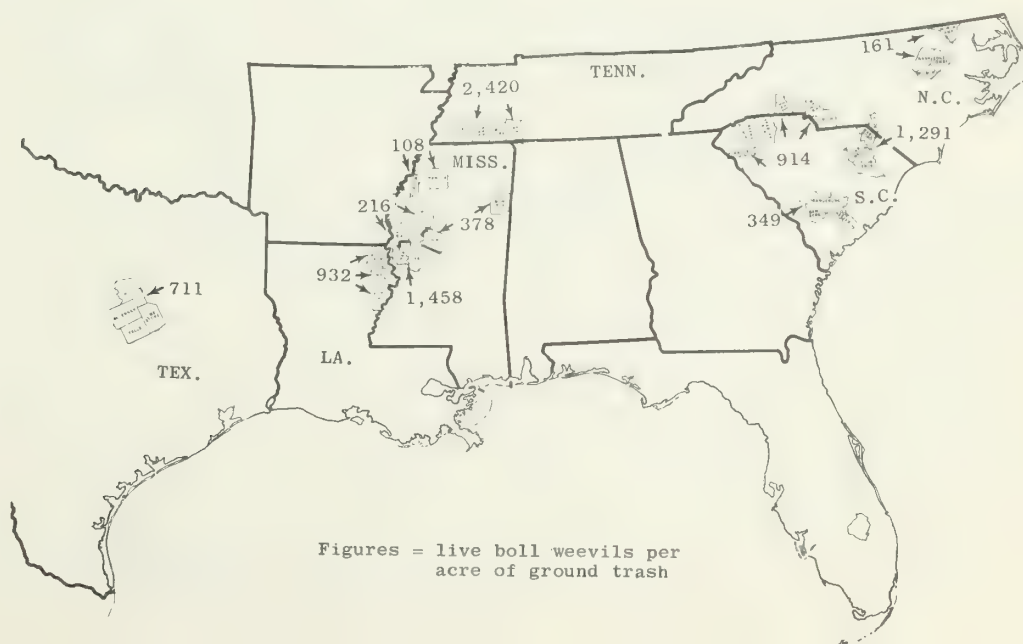
Collections in MISSISSIPPI were started February 27 and all examinations completed by March 6. Three samples were taken at each location, and 7 or 8 locations were sampled in each county. Wherever possible, samples were taken from locations sampled last fall. Two counties made up each area and the State was divided into 4 areas as follows: Area 1 - South Delta (Sharkey and Yazoo Counties), Area 2 - Central Delta (Washington and Leflore Counties), Area 3 - North Delta (Coahoma and Panola Counties), Area 4 - Hill Section (Holmes and Monroe Counties). Forty-five samples were taken from a total of 15 locations in each of the 4 areas. The average number of weevils found per acre in Areas 1, 2, 3, and 4 was 1,458, 216, 108, and 378, respectively. The State average was 540 compared with 1,525 in 1967, 1,425 in 1966, 995 in 1965, 289 in 1964, 13 in 1963, 1,132 in 1962, 1,246 in 1961, and 821 in 1960. The percent survival for Areas 1, 2, 3, and 4 was 18.37, 4.44, 1.82, and 5.83, respectively. The State average (percent survival) was 8.57 compared with 51.60 in 1967, 19.45 in 1966, 22.19 in 1965, 9.68 in 1964, 0.2 in 1963, 13.59 in 1962, 8.59 in 1961, and 16.23 in 1960. (Pfrimmer).

Collections were made in northeast LOUISIANA March 5-20. This area includes Madison, East Carroll, Tensas, and West Carroll Parishes. Three samples were

collected at each location and 20 locations were used in Madison Parish, 10 in East Carroll Parish, 10 in Tensas Parish, and 5 in West Carroll Parish. A total of 135 samples was taken. The average number of weevils per acre of trash was 1,532 in Madison Parish, 484 in East Carroll Parish, 403 in Tensas Parish, and 484 in West Carroll Parish, or an average of 932 for the 4-parish area. Based on the 6,473 live boll weevil adults found per acre of trash in the fall of 1967, winter survival in the 4-parish area was 14 percent. In Madison Parish, where similar records have been kept for the past 31 years, survival for the winter of 1967-1968 was 19 percent compared with the average of 43 percent for the 31-year period. There have been only 8 years that survival was as low or lower than in the spring of 1968. The total rainfall recorded at the Tallulah Laboratory from November 20, 1967, to March 20, 1968, at which time the spring ground trash collections were completed, was 25.08 inches. In this same period there were 45 days when the temperature was 32° or less and 25 days when the temperature was 25° or less. The lowest temperature recorded was 20° on January 8 and February 22. The greatest rainfall recorded in a 24-hour period was 2.97 inches on December 18. Approximately 7 inches of snow fell on March 22. (Cleveland).

In central TEXAS, spring collections were made March 18-25 from the same locations in Falls, Hill, Limestone, and McLennan Counties as in the fall of 1967. Three samples were taken from each location and either 6 or 7 locations were sampled in each county; 75 samples were taken from a total of 25 locations in the 4 counties. The average number of weevils found per acre in Falls, Hill, Limestone, and McLennan Counties was 1,075, 403, 806, and 576, respectively, with an area average of 711. This compared with 4,704, 7,526, 3,763, and 3,917 found in these respective counties in the fall of 1967, with an average of 4,942 weevils per acre for the area. The percent survival for 1968 was 14.4 compared with 26.5 for 1967, 24.8 in 1966, 100 in 1965, 18.8 in 1964, 25.4 in 1963, 33.1 in 1962, 33.7 in 1961, and 31.1 in 1960. The indicated spring survival of 14.4 percent in 1968 was lower than for any year since the survey was started in 1959. Fewer weevils were found in the spring of 1968 than in any year except 1963 and 1964. Winter weather was comparatively mild with subfreezing temperatures on 27 days. A minimum of 19° was recorded on January 7. Rainfall for the period December through March 25 totaled 10.31 inches, or 1.13 inches above normal for the period. Most of the area, however, received more rainfall than this and has been very wet since November. (Cowan).

See tabulation on page 320.



BOLL WEEVIL SURVIVAL SURVEYS - SPRING 1968

Area (County and State)	Number of Weevils Per Acre	
	1967	1968
<u>NORTH and SOUTH CAROLINA</u>		
South-central South Carolina (Orangeburg, Bamberg, and Dorchester Counties).	3,899	349
Coastal Plain of South and North Carolina (Florence, Darlington, and Marlboro Counties, S.C.; Scotland County, N.C.).	1,542	1,291
Piedmont of South and North Carolina (Anderson, Greenville, and Spartanburg Counties, S.C.; Mecklenburg, Cleveland, and Union Counties, N.C.)	1,801	914
North-central North Carolina (Nash, Wilson, Edgecombe, and Northampton Counties).	645	161
<u>TENNESSEE</u>		
McNairy, Hardin, Hardeman, and Fayette Counties	3,388	2,420
<u>MISSISSIPPI</u>		
South Delta (Sharkey and Yazoo Counties (area 1)).	1,782	1,458
Central Delta (Washington and Leflore Counties (area 2)).	1,296	216
North Delta (Coahoma and Panola Counties (area 3)).	1,512	108
Hill Section (Holmes and Monroe Counties (area 4)).	1,512	378
<u>LOUISIANA</u>		
Northeastern (Madison, East Carroll, Tensas, and West Carroll Parishes).	2,057*	932
<u>TEXAS</u>		
Central (Falls, Hill, Limestone, and McLennan Counties).	1,292	711

* West Carroll Parish not included in 1967 spring survey.

Periodical Cicadas - Outlook for May and June 1968

Brood VIII of periodical cicadas (17-year race) is expected to be concentrated in western Pennsylvania, eastern Ohio, and the northern Panhandle of West Virginia. Scattered records for Maryland, Massachusetts, New Jersey, New York, Virginia, and North Carolina have been reported over the years.

Brood XXVIII, the 13-year race of periodical cicadas, is also scheduled for this year in the South, but no records seem to be available.

As these insects are difficult to determine since the group was revised, Dr. R.C. Froeschner, Federal Taxonomist, will be glad to determine the specimens. These should be sent to him at the U.S. National Museum, Washington, D.C. 20560.

For a table of coincidence of broods of periodical cicadas see following page.

Brood VIII

Periodical Cicadas

17-year race

1866
1883
1900
1917
1934
1951
1968

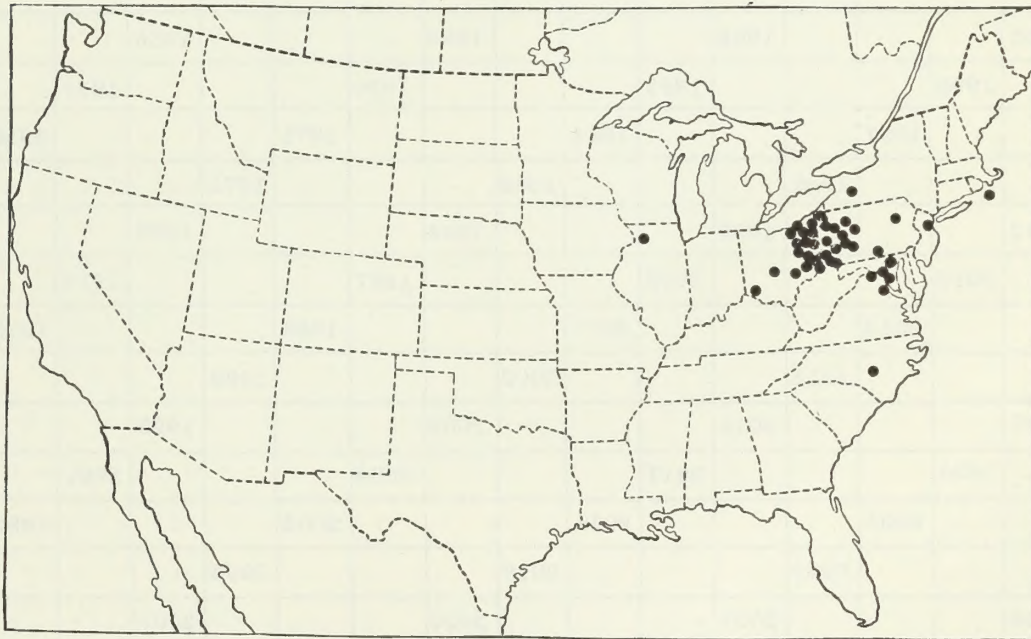


Table of Coincidence of Broods of Periodical Cicadas

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
XVIII		1945				1932				1919				1906			
XIX			1946				1933				1920				1907		
XX				1947				1934				1921				1908	
XXI	1961				1948				1935				1922				1909
XXII		1962				1949				1936				1923			
XXIII			1963				1950				1937				1924		
XXIV				1964				1951				1938				1925	
XXV	1978				1965				1952				1939				1926
XXVI		1979				1966				1953				1940			
XXVII			1980				1967				1954				1941		
XXVIII				1981				1968				1955				1942	
XXIX	1995				1982				1969				1956				1943
XXX		1996				1983				1970				1957			
XVIII			1997				1984				1971				1958		
XIX				1998				1985				1972				1959	
XX	2012				1999				1986				1973				1960
XXI		2013				2000				1987				1974			
XXII			2014				2001				1988				1975		
XXIII				2015				2002				1989				1976	
XXIV	2029				2016				2003				1990				1977
XXV		2030				2017				2004				1991			
XXVI			2031				2018				2005				1992		
XXVII				2032				2019				2006				1993	
XXVIII	2046				2033				2020				2007				1994
XXIX		2047				2034				2021				2008			
XXX			2048				2035				2022				2009		

Prepared in Survey and Detection
Operations, Plant Pest Control
Division, Agricultural Research
Service, U.S. Department of
Agriculture.

U.S. Dept. Agr.
Coop. Econ. Ins. Rpt.
18(16):321-322, 1968

UNITED STATES DEPARTMENT OF AGRICULTURE
Hyattsville, Maryland 20782

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF AGRICULTURE

OFFICIAL BUSINESS

